⊖ KoalaPad™

TouchTablet™ Owner's Manual

PLEASE NOTE

Reference is made in your owners guide to the inclusion of overlays for the Touch Tablet surface.

Overlays are defined or required by specific software packages and as such will be included in the software packaging.

CUSTOMER SATISFACTION

The KoalaPad™ Touch Tablet carries a 90-day warranty against defects in material or workmanship, effective from the date of purchase. No other warranties are expressed or implied. In the event of touch tablet failure during the warranty period, simply return your tablet, with the sales receipt, prepaid to the address below. After warranty expiration, defective touch tablets should be returned to Koala Technologies Corporation for repair or replacement. A flat fee of $20.00 is charged to cover complete repair and refurbishing of the touch tablet plus a $5.00 handling fee. Send your tablet, check or money order for $25.00 and a letter with your name and return address, describing the defect, to: Touch Tablet Repair Center, Koala Technologies, 253 Martens Avenue, Mt. View, California 94040.

LIMITATION ON WARRANTIES AND LIABILITY

Even though Koala Technologies has tested the product described in this manual and reviewed this manual's contents, and has made a sincere effort to verify the accuracy of this manual and its accompanying software. *Neither Koala Technologies nor its suppliers make any warranty, expressed, implied, or statutory with respect to this manual or to the product described in this manual, or to its related software, as to their quality, performance, merchantability, or fitness for any particular purpose.* As a result, this product and manual are sold "as is," and you, the purchaser, are assuming the entire risk as to their quality and performance. In no event will Koala Technologies or its suppliers be liable for direct, indirect, incidental, or consequential damages resulting from any defect in the product or manual, even if they have been advised of the possibility of such damages. In particular, they shall have no liability for any programs developed or used with this product, including the costs of recovering or reproducing these programs or data. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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PATENTS

The KoalaPad Touch Tablet is the subject of applications for
Letters Patent and Design Patents. Unauthorized duplication of the
touch tablet technology, its associated electronics, or its housing
may result in patent infringement and is expressly prohibited.

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INTRODUCTION

Congratulations! You are in possession of a very versatile computer tool—the KoalaPad Touch Tablet.

Your KoalaPad Touch Tablet is a state-of-the-art, highly technical position sensing device. It converts finger or stylus pressure and movement into electronic signals for controlling computers and it is particularly useful for drawing pictures and pointing to images on computer T.V. screens. Depending on the computer program you are using, your finger's movement across the tablet could result in the drawing of a colored line on the display, the movement of a game piece, the creation of a musical sound, the triggering of programmable function keys—and more. This manual will explain how to do these things.

While your touch tablet is durable and will most likely have a very long life, it can be damaged by improper use. For that reason, we advise you to read Section 1 (and especially the Do's and Don'ts) to be sure that you're using your touch tablet carefully.

SPECIAL NOTE

Remember that your KoalaPad Touch Tablet will not operate without software which has been designed specifically for its use. However, on the Apple Computer, much of the software which works with paddles will also perform with the touch tablet.

UNPACKING YOUR TOUCH TABLET

Here's what you should find in the box when you unpack your KoalaPad Touch Tablet:
- The KoalaPad
- A disk which contains one program
- A stylus
- A tablet overlay
- This manual

A GUIDE TOUR OF YOUR TOUCH TABLET

As you look at your Koala Technologies touch tablet (see the Illustration), you will see a large black square area (A) and two rectangular switches (B). The black area is sensitive to the touch of your finger. Slide your finger around on the black square. If you're running one of the programs which came in the packing box, you'll see that the touch tablet transmits your finger's position to the computer.
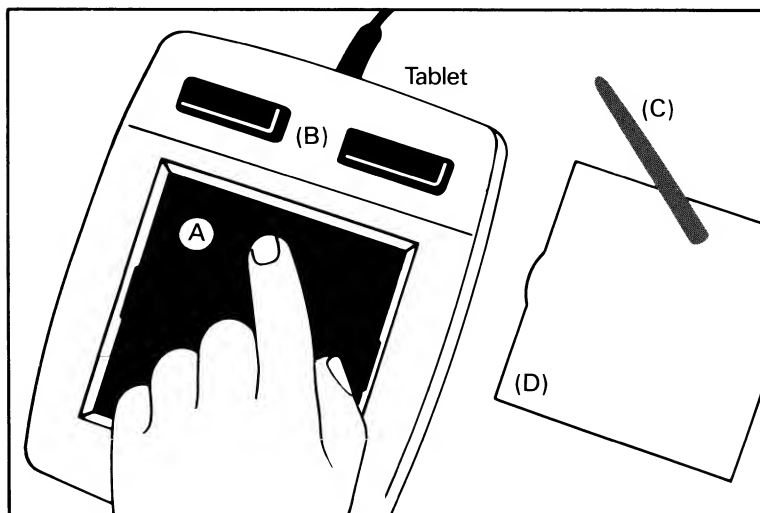
The surface of the touch tablet pad is also sensitive to the stylus (C). Try writing on the touch tablet with your stylus: you may find that you prefer its use to that of your finger. Don't use stylus substitutes which seem similar (such as ball point pens or pencils); they'll damage the tablet surface.

The two switches (B) also send information to the computer, but the information they send varies with the program being used. If you are using a drawing program, pressing one of these buttons might result in having the computer draw a line rather than just moving the cursor.

The two overlays (D) can be used to mark regions of the tablet used by different programs. To insert an overlay, position it so that the "ears" are aligned horizontally. Squeeze the overlay gently from the sides so that it buckles up; you can then insert the ears in the two slots provided on the tablet. To remove the overlay, slip a fingernail under the top or bottom edge and gently lift.

THE DO'S AND DON'TS OF TOUCH TABLET CARE

Your KoalaPad Touch Tablet is a rugged device that should give you years of trouble-free service...if you follow a few simple precautions. A lot of the care involved is just common sense.

FIRST, THE DON'TS:

- Don't leave your touch tablet sitting on a radiator, near a heater, or in a place where it can be baked by direct sunlight for prolonged periods of time.
- Don't write or draw on the tablet surface with anything except your finger or the stylus that came in the packing box.
- Don't leave objects sitting on top of the tablet surface.
- Don't carry or swing the tablet by its cord.
- Don't use sharp tools or other implements to remove the overlays.
- Don't immerse in water.

AND NOW FOR THE DO'S:

- Do write on the touch tablet surface with your finger or the stylus that came in the packing box.
- Do keep your touch tablet clean. You can remove dirt and grease from the tablet by using a cloth dampened with a mild soap (no detergents or solvents, please!). After you've washed the surface, clean it off by using a cloth dampened with water. Dry with a non-abrasive towel.

THE KOALAPAD TOUCH TABLET AND YOUR COMPUTER

Your KoalaPad Touch Tablet has been factory-tuned to operate on a specific computer. For example, if you buy a tablet that has been tuned for an Apple Computer, it will work perfectly on an Apple Computer, but won't work on an Atari Computer or a Commodore Computer. So be sure you have the right touch tablet for your computer.

Check now: on the underside of the tablet is a label with a number that identifies for which computer the tablet is tuned. Check the chart below to see that you have the correct tablet for your computer. In the unlikely event that you have the wrong tablet, exchange it at your dealers.

| KoalaPad number	Computer
001	Apple II, II+, & IIe
002	Commodore Vic-20
003	IBM
004	Atari 400 & 800

APPLE II, II+ AND IIe COMPUTERS®

INSTALLING THE KOALAPAD TOUCH TABLET ON YOUR APPLE

1. Read the label on the bottom of your touch tablet to be sure that you have in your possession the tablet designed specifically to be used with the Apple Computer.
2. Disconnect the computer's power cord and carefully remove the computer's lid (see your Apple Owner's Manual if you need more information). Near the back, on the right side of the circuit board (A), you will see the game controller port. If you have a paddle controller, a mouse or a joystick connected to the computer, disconnect it at this time. (Consult your Apple Owner's Manual for the Game I/O location and connecting procedures.)
3. Now look at your touch tablet: its housing has been designed to sit at a comfortable angle on a flat surface or to be held in one hand while being used by the other. You will soon determine which way is most comfortable for you. For now, though, simply place the touch tablet on a flat surface near your computer where it will be comfortable for you to use.

4. Unwind the power plug from the touch tablet and insert the plug into the game controller port. Replace the computer's lid and connect its power cord once again. Your tablet is now hooked up and ready to go!

Plug the 16-pin connector into game port.
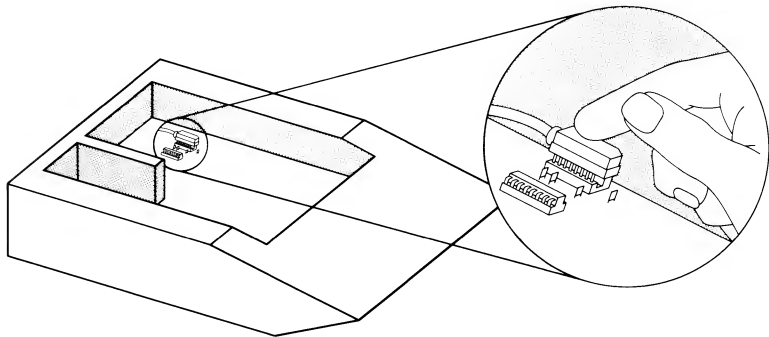
READING DATA FROM YOUR TOUCH TABLET

If you are an advanced programmer or technician, you may want to occasionally read the tablet data and incorporate it into your own software programs.

To read data from the tablet, read the paddle port using the BASIC statement:

```
X = PDL(0)
QQ = SIN(123):REM   REQUIRED DELAY
Y = PDL(1)
PRINT X,Y
```

To read switches, use the following statements:

```
A = PEEK (-16287)
B = PEEK (-16286)
IF A > 127 OR B > 127 THEN PRINT
```

When you are programming, remember that you can detect when the finger is not touching the tablet surface. This is because, with use of the paddle statement, values less than about 10 can be used in the software design to indicate that nothing is touching the tablet surface.

INSTALLING THE KOALAPAD TOUCH TABLET ON YOUR IBM-PC

1. Unplug your computer's power cord.
2. Read the label on the back of your touch tablet to be sure that you have a tablet that has been tuned specifically for the IBM-PC.
3. Ascertain whether or not you have a game controller card plugged into any one of the slots contained within the machine—the touch tablet won't work unless you do. If you don't have such a card, you can obtain one from your IBM dealer (see your IBM-PC Owner's Manual for more details). Once you have installed the game card, you will see that a 15-pin socket on the card is accessible from the rear of the machine.
4. Now look at your KoalaPad Touch Tablet. The touch tablet housing has been designed to sit at a comfortable angle on a flat surface or to be held in one hand while being used by the other. You will soon determine which way is most comfortable for you. For now, though, simply place the touch tablet on a flat surface near your computer where it will be comfortable for you to use.
5. Unwind the power cord from the touch tablet and plug it into the 15-pin socket on the game controller card. Your tablet is now ready for use.

READING DATA FROM YOUR TOUCH TABLET

Advanced programmers and technicians may occasionally want to read the tablet data and incorporate it into their own software programs.

The following program allows the reading of data:

```
 5 Strig On
20 Print Stick(O); Stick(1);
30 GOTO 20
```

When programming, remember that you can detect when the finger is not touching the tablet surface. This is because, when using the paddle statement, values around 6 will be encountered and can be used in the software design.

INSTALLING THE KOALAPAD TOUCH TABLET ON YOUR COMMODORE-64

1. Unplug your computer's power cord.
2. Check the label on the bottom of your KoalaPad Touch Tablet to be sure that you have in your possession the tablet designed to be used only with the Commodore-64. If the name of some other computer is written on the label, you should not connect it. Make an appropriate exchange at your dealer's.
3. The touch tablet housing has been designed to sit at a comfortable angle on a flat surface or to be held in one hand while being used by the other. You'll soon determine which way is most comfortable for you; but, for now, place the touch tablet on a flat surface near your computer where it will be comfortable for you to use.
4. On the right side of your keyboard, you will find two ports, Port 1 and Port 2. Unwind the power plug from your touch tablet and insert it into Port 1 (always use Port 1 with your tablet). Your touch tablet is now ready for use.

READING DATA FROM YOUR TOUCH TABLET

If you are an advanced programmer or technician, you may want to occasionally read the tablet data and incorporate it into your own software programs.

To read data, use the following program:

```
10 Print Peek (54297)
20 Print Peek (54298)
30 GOTO 10
```

This program has limitations, and we suggest that, if you are doing serious research, you use the Assembly Language Program contained in the Commodore-64 Programmer's Reference Guide, published by Howard W. Sams & Company. Not only does the book contain programs of much greater depth, but it goes into great detail on the subject of reading switches.

When programming, remember that you can detect when the finger is not touching the tablet surface. This is because, with use of the paddle statement, values around 6 will be encountered and can be used in the software design.

INSTALLING THE KOALAPAD TOUCH TABLET ON YOUR COMMODORE VIC-20

1. Unplug your computer's power cord.
2. Check the label on the bottom of your touch tablet to be sure that you have in your possession the tablet designed to be used specifically with the Commodore VIC-20. If the name of some other computer is written on the label, you should not connect it. Make an appropriate exchange at your dealer's.
3. The touch tablet housing has been designed to sit at a comfortable angle on a flat surface or to be held in one hand while being used by the other. You'll soon determine which way is most comfortable for you. For now, though, simply place the touch tablet on a flat surface near your computer where it will be comfortable for you to use.
4. You will find one port on the right side of your keyboard. Unwind the power plug from the touch tablet. Insert the plug into the port. Your KoalaPad Touch Tablet is now ready to be used.

READING DATA FROM YOUR TOUCH TABLET

If you are an advanced programmer or technician, you may want to occasionally read the tablet data and incorporate it into your own software programs.

To read data, use the following program:

10 Print Peek (36872)
20 Print Peek (36873)
30 GOTO 10

This program, for various reasons, has certain limitations. We suggest, then, that, for serious research, you refer to the program contained in the VIC-20 Programmer's Reference Guide, published by Howard W. Sams & Company. This book contains a program of much greater depth and will explain to in great detail how to read switches.

When you are programming, remember that you can detect when the finger is not touching the tablet surface. This is because, when using the paddle statement, values around 6 will be encountered and can be used in the software design.

INSTALLING THE KOALAPAD TOUCH TABLET ON YOUR ATARI 400 OR 800

1. Unplug your computer's power cord.
2. Read the label on the bottom of your Koalapad Touch Tablet to be sure that you have in your possession the tablet designed specifically to be used with the Atari Computer. If, by some odd chance, you have in your possession a touch tablet for some other computer, don't attempt to connect it. Return to your dealer and obtain the appropriate one for your computer.
3. Now unwind the power plug from the touch tablet. The touch tablet housing has been designed to sit at a comfortable angle on a flat surface or to be held in one hand while being used by the other. You will soon determine which way is most comfortable for you. For now, though, simply place the touch tablet on a flat surface near your computer where it will be comfortable for you to use.
4. On the front of the keyboard, you'll see 4 controller jacks; simply insert the touch tablet plug into No. 1. Your touch tablet is now ready to be used.

READING DATA FROM YOUR TOUCH TABLET

If you are an advanced programmer or technician, you may want to occasionally read the tablet data and incorporate it into your own software programs.
   To read data from the tablet, use the following program:
   10 Print Paddle(0) Paddle(1) Stick(0) Strig(0)
   20 GOTO 10
   When you are programming, remember that you can detect when the finger is not touching the tablet surface. This is because, when using the paddle statement, values around 6 will be encountered and can be used in the software design.

APPENDIX A/TECHNICAL SPECIFICATIONS
THE KOALAPAD TOUCH TABLET

Size: 6" x 8" x 1"

Active Surface Area: 4.25" x 4.25"

Weight: Approximately 1 lb.

Resolution: Limited by the host computer's
                                 analog-to-digital hardware.
                                 Typically 256 points per x-y
                                 axis for the Apple computer.

Power Requirement: Must draw +5v from host
                                 computer. Approx. 20 ma.

Interface Options: A. Game paddle (variable
                                    resistor) uses standard plug.
                                 B. RS-232-C. (Contact Koala
                                    Technologies for
                                    specifications)
                                 C. Custom upon request.

Interface Software: Requires no special software
                                 overhead.

Template Overlay Locations: Designed into the housing.

Operating Temp., Humidity: 0 to 50°c, 95% RH,
                                 non-condensing.